



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,229	10/07/2005	Wolfgang Dinkelacker	K0004/7006	6706

64967 7590 02/15/2008
LAW OFFICES OF PAUL E. KUDIRKA
40 BROAD STREET
SUITE 300
BOSTON, MA 02109

EXAMINER

SINGH, SUNIL K

ART UNIT	PAPER NUMBER
----------	--------------

3732

MAIL DATE	DELIVERY MODE
-----------	---------------

02/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2-8 and 12-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites a limitation where the screw has an underside with a recess having a surface in the form of a *negative cone* with a *cone base*. It is unclear how a negative cone has a positive cone base. It is also unclear to what the applicant is referring to as the *negative cone*.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. As best understood by the examiner, Claims 2-6 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Lustig et al (US 6,287,115).

Lustig et al. discloses an implant having: an implant body having a longitudinal axis; an implant top portion having a through-borehole (825 and 915), a first end that mate with the implant body at an interface (See Fig. Below) and at a second opposing end, a cylindrical recess (See Fig. Below) arranged coaxially with the through-borehole,

Art Unit: 3732

the bottom of the cylindrical recess being formed as a truncated cone with a surface surrounding the through-borehole and a cone base facing towards the first end; a connecting screw (see Fig. Below) that passes through the through-borehole and engages a threaded borehole (see Fig. below); a borehole that surrounds a through-borehole (825 and 915) for connection screw and a recess (see Fig. Below) with a supporting area designed as a truncated cone (Shown in Figure below)(Fig. 1-17) for the screw head; a screw head having an underside that is designed as a female taper shown in Fig. 15 (reproduced in the Figure below); wherein the underside has a recess with a surface in the form of a negative cone with a cone base facing toward the first end (see Fig. Below) an implant top that is adapted to the profile of the implant body by means of a screw (Column 2, Lines 58-67). It is inherent that the female taper and the truncated cone are brought into close contact when the connection screw is tightened. Lustig et al. further discloses an implant where the interface between the implant body and the implant top portion has a head that runs at a right angle to the longitudinal axis of the implant body (Figs. 15 and 43c); an interface between the implant body and the implant top that has a profile adapted to a comb shape of the jaw (Fig. 43c); a profile that is inclined toward the buccal side and the lingual side (Fig. 43c); and where the profile toward the buccal side and the lingual side is circularly rounded and also has a bell shape (Figs. 1-17, 43b and 43c). Lustig further discloses a jaw implant where the inclined faces of the buccal side and on the lingual side in the interface area of the implant body form an angle, which is larger than the angle between corresponding inclined surfaces on the buccal side and the lingual side in the interface area of the

Art Unit: 3732

implant top portion; and where the rounded surface on the buccal side and the lingual side have a smaller radii of curvature in the interface area of the implant top portion than the corresponding rounded surfaces on the buccal side and on the lingual side in the interface area of the implant body (Figs. 15-17, 43b and 43c).

Art Unit: 3732

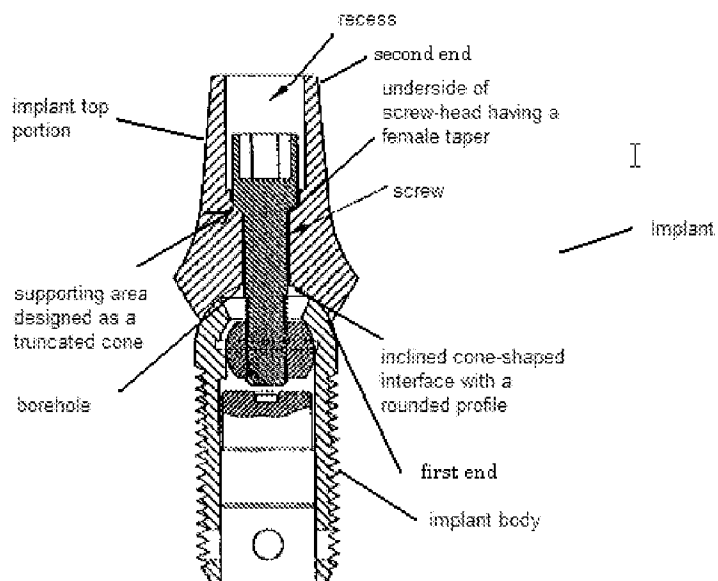
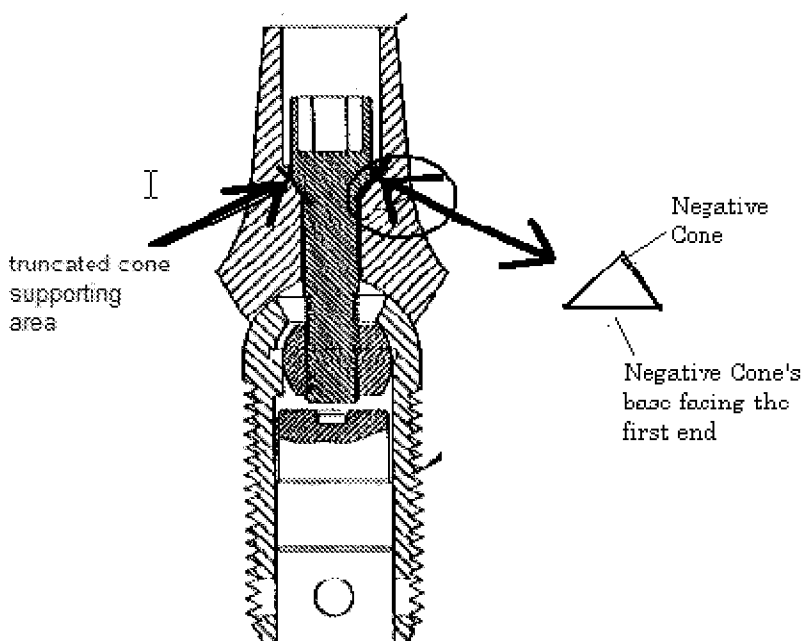


FIG. 15



Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7,8 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lustig et al. (US 6,287,115) in view of Kirsh (US 4,793,808).

Lustig et al. discloses the invention substantially as claimed except for an implant top that is elastically deformable under pressure of a screw when tightened.

Kirsh teaches an implant where the implant top portion having an interface area that is elastically deformed under the action of a screw and where the elastic deformation exerts a restoring force in order ensure that the fitted connection is not loosened (Column 2, Lines 3-10 and Column 6, Lines 4-5). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lustig by having an interface area of the implant top portion that is elastically deformable under pressure of a screw, as taught by Kirsh, in order to ensure that the fitted connection cannot be loosened.

7. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lustig et al. (US 6,287,115) in view of Kirsh (US 4,793,808) and in further view of Balfour et al. (US 2003/0068599).

Lustig et al./Kirsh discloses the invention substantially as claimed except for an implant where the bell shaped profile in the interface area has a circular concave part having a smaller radii of curvature than the corresponding circular convex part.

Balfour et al. teaches a dental implant having a bell shaped interface area (16) with a circular concave part having smaller radii of curvature than the corresponding circular convex part (Fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Lustig/Kirsh by having an interface area in the bell shape, as taught by Balfour et al., in order to provide an alternate means of attaching the implant bottom portion to the implant top portion.

Allowable Subject Matter

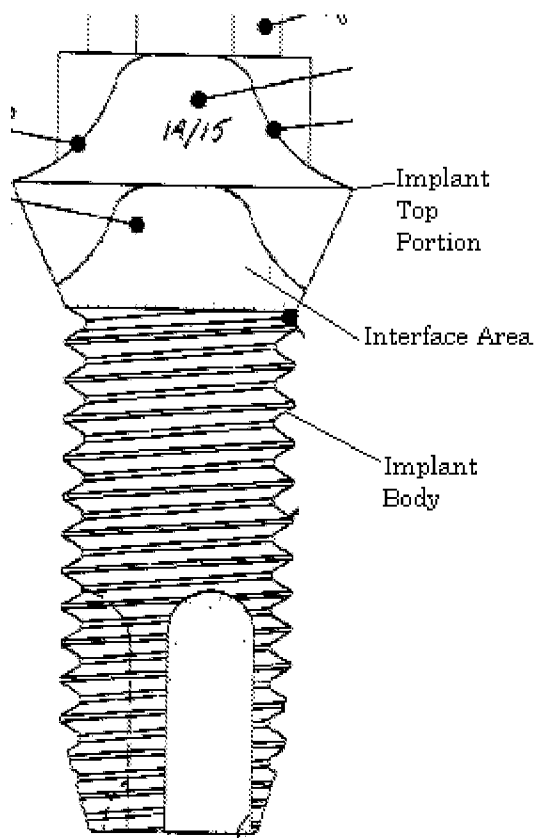
8. .Claims 10 and 11 allowed.

Response to Arguments

9. Applicant's arguments filed 12/06/2007 have been fully considered but they are not persuasive. Applicant argues that Lustig does not disclose a connecting screw with a negative conical recess in the underside of the screw head where the cone base faces toward the first end and a cylindrical recess having a bottom portion being formed as a truncated cone with a surface surrounding the through-borehole and a cone base facing towards the first end. The examiner disagrees. As shown in the Figure Above (see rejection), Lustig does in fact disclose a cylindrical recess having a bottom portion in the form of a truncated cone with a surface surrounding the through-borehole and a cone base facing towards the first end; and the underside of the screw head having a form of a negative cone with a cone base facing toward the first end (see the

Art Unit: 3732

reproduced figure in the rejection above). Applicant further argues that Balfour does not teach a structure that includes an interface area between an implant body and an implant top portion which has an approximately bell-shaped profile. The examiner disagrees. The figure reproduced below, shows that Balfour does in fact teach an interface area having a bell-shaped profile.



Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sunil K. Singh whose telephone number is (571) 272-3460. The examiner can normally be reached on Monday-Friday 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris L. Rodriguez can be reached on (571) 272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sunil K Singh/
Examiner
Art Unit 3732

SKS
02/06/2008

/Cris L. Rodriguez/
Supervisory Patent Examiner, Art Unit 3732